

Patent [19]

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[54] APPARATUS FOR PRODUCING ULTRA-PURE AIR

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[57] ABSTRACT

PROBLEM TO BE SOLVED: To collect/remove chemical pollutants existing in the air to be supplied into a clean room and others together with particulates safely and efficiently by passing raw air containing chemical substances from the introduction side through a particle filter layer, a photocatalyst holding layer, an ion exchange fiber packing layer in turn.

SOLUTION: Raw air 2 containing pollutants generated in a clean room 1 is sucked continuously into an ultra-pure air producing apparatus 8 by a blower 3. First, particulates are collected/removed a particle filter layer 4. Next, after the passage through an ultraviolet light source irradiation chamber 5 installed in a purification route, neutral substances in chemical pollutants are collected/removed by a photocatalyst holding layer 6, and acidic gas and/or alkaline gas in the pollutants and components ionized by the layer 6 are collected/removed by an ion exchange fiber packing layer 7. Ultra-pure air 9 after removal of the pollutants is circulated in the clean room 1. Efficient purification is attained, and microorganisms in the raw air 2 can be sterilized semi-perpetually by the layer 6 and the chamber 5.

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